

Title (en)

Adaptive illumination correction of scanned images

Title (de)

Adaptive Beleuchtungskorrektur abgetasteter Bilder

Title (fr)

Correction adaptative de l'illumination d'images analysées

Publication

EP 1221810 A2 20020710 (EN)

Application

EP 01130199 A 20011219

Priority

US 75056800 A 20001228

Abstract (en)

A method of correcting illumination variation in a scanned image of a non-planar original object, such as an open book, includes scanning at least a portion of the book in order to produce scanned image data. Illumination variation data is extracted from the scanned image data and used to derive a plurality of illumination compensation values. The scanned image data is then compensated or scaled in accordance with the illumination compensation values. Illumination data is acquired through a sampling window having a long and thin geometry. From the data acquired via the sampling window, foreground and background illumination distributions are defined. From the foreground and background illuminations, high and low threshold values are determined in order to calculate a set of reference or compensation values. A tone reproduction curve is generated in order to map the scanned data, thus normalizing the illumination variation. Alternately, an illumination gain factor is employed in the compensation. <IMAGE>

IPC 1-7

H04N 1/401; **H04N 1/407**

IPC 8 full level

H04N 1/38 (2006.01); **H04N 1/401** (2006.01); **H04N 1/407** (2006.01); **H04N 1/409** (2006.01)

CPC (source: EP US)

H04N 1/401 (2013.01 - EP US); **H04N 1/4072** (2013.01 - EP US)

Citation (applicant)

- US 6175660 B1 20010116 - NABESHIMA TAKAYUKI [JP], et al
- US 6053900 A 20000425 - BROWN JOE E [US], et al

Cited by

EP1914979A3; EP1926303A1; GB2443457A; GB2443457B; US8218202B2; US8290293B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1221810 A2 20020710; **EP 1221810 A3 20041020**; **EP 1221810 B1 20090311**; DE 60137906 D1 20090423; JP 2002232720 A 20020816; US 2002085248 A1 20020704; US 6806980 B2 20041019

DOCDB simple family (application)

EP 01130199 A 20011219; DE 60137906 T 20011219; JP 2001388702 A 20011221; US 75056800 A 20001228